

CEDAR APPLE RUST

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INTRODUCTION. The familiar reddish balls we call cedar apples, which decorate many junipers as ornaments do a Christmas tree, are galls caused by the mycelium of the fungus *Gymnosporangium juniperi-virginianae* Schw. These galls (Fig. 1), composed of host tissue penetrated by mycelium, bear the telia of the fungus. The fungus overwinters in the cedar apples as mycelium.

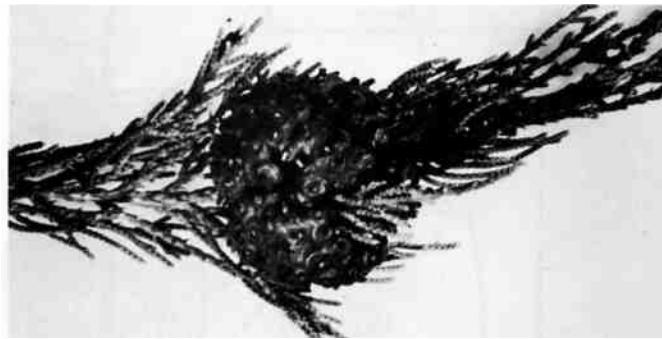


Fig. 1. Cedar apple gall on red cedar twig.

SYMPTOMS. This fungus is a heteroecious rust or a rust requiring two not closely related hosts in the life cycle. The cycle (Fig. 2) is composed of the gametophyte state (the state in the life cycle which bears pycnia and aecia – bright orange red to black specks on the leaves, and dingy white columns on the underside of the same spots), and the sporophyte state (the state in the life cycle which bears uredia and telia – young greenish brown galls appearing the first season followed by dark reddish brown galls with reddish gelatinous horns the second spring after infection) occurring on alternating hosts.

CONTROL. The most effective control of this fungus is the eradication of one host from the vicinity of the other. In this case it is the eradication of *Malus angustifolia* (Ait.) Michx. and *Crataegus* spp. L., in plantings of red cedar, *Juniperus virginiana* L., which would help reduce the incidence of cedar apple rust. Cycloheximide (Acti-dione) is approved for spraying cedar trees to prevent germination of spores produced in the cedar galls. Do not use on apple and hawthorne.

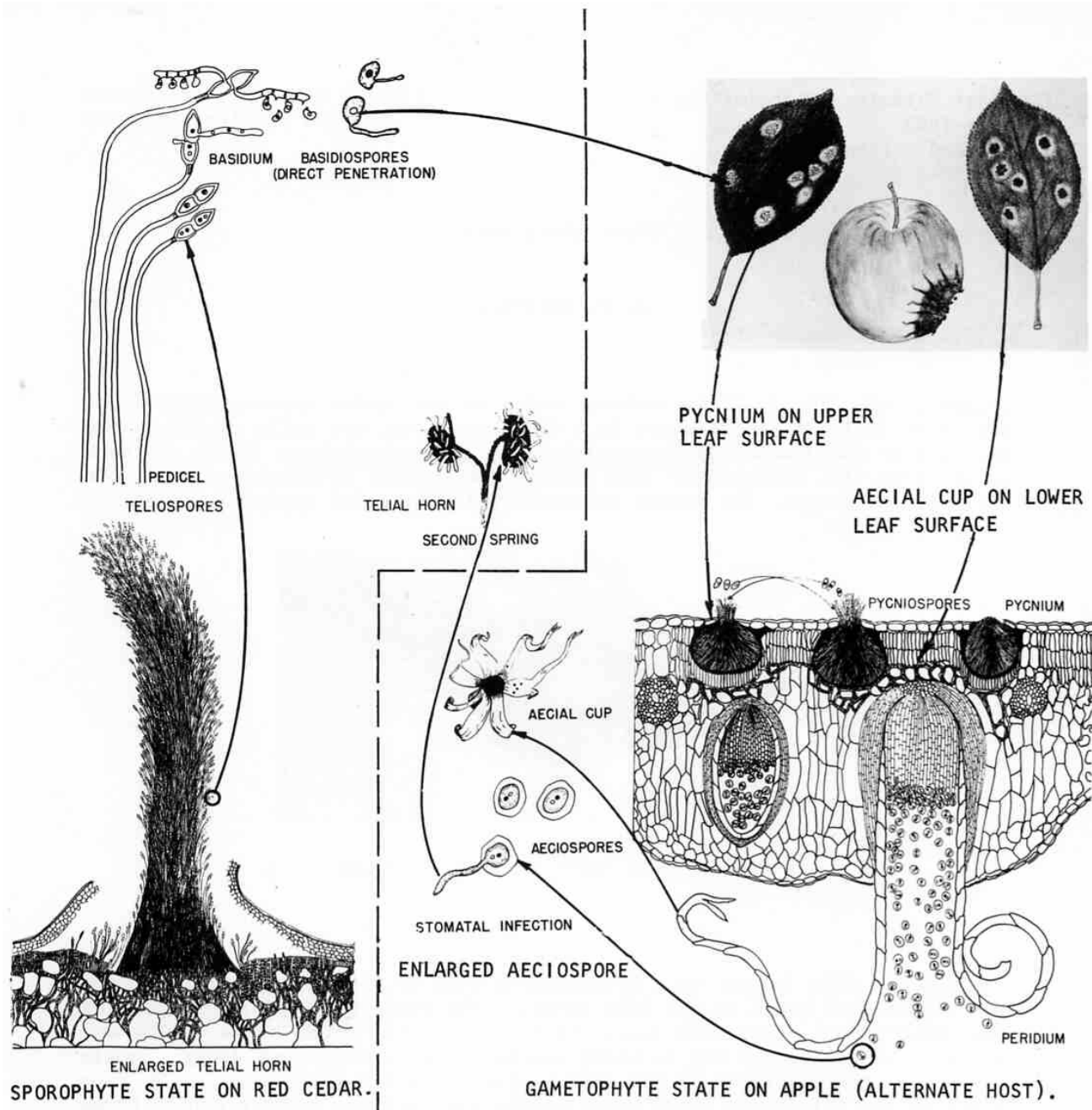


Fig. 2. Life cycle of cedar apple rust (after John H. Owen).

References

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